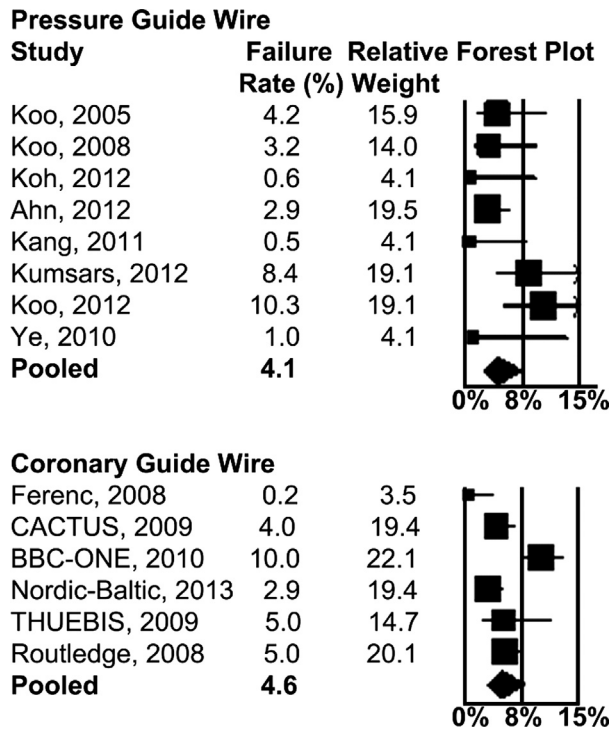
FFR

CRT-165

Fractional Flow Reserve Versus Kissing Balloon Inflation in Coronary Bifurcations: A Meta-Analysis of Success Rates

Sameer Ather, Massoud Leesar
University of Alabama at Birmingham, Birmingham, AL

Background: Percutaneous coronary intervention of coronary bifurcation lesions (CBL) is technically difficult. The European Bifurcation Club recommends performing either fractional flow reserve (FFR) estimation of the side-branch or kissing balloon inflation (KBI) after the main vessel stenting when a significant (>75%) stenosis is present at the side-branch ostium. Even though FFR is recommended in CBL, there is concern about side-branch (SB) crossing during FFR among interventionists. Till date, there are no data comparing the failure rates of SB crossing during FFR and KBI in CBL.
Methods: We performed a comprehensive search to find studies reporting the failure rates of either FFR or KBI in CBL up to Nov 2013.
Results: Our search identified 8 studies that reported failure rates of SB crossing with a pressure guidewire (n=798) and 6 studies that reported failure rates of SB crossing with a coronary guide wire (n=2106). There was significant heterogeneity among the 8 studies that reported the failure rates of SB crossing during FFR estimation of CBL. (I^2=53, p=0.04). Thus, random effects model for combining study estimates were used and estimated pooled failure rate were found to be 4% (95% CI: 2% to 7%). There was significant heterogeneity among the 8 studies that reported the failure rates of SB crossing during KBI of CBL (I^2=84, p<0.001). Thus, random effects model for combining study estimates were used and estimated pooled failure rate was found to be 5% (95% CI: 3% to 8%). There was no significant publication bias in the reported failure rates either in the FFR estimation studies or in the KBI studies.
Conclusion: The failure rates are low with both FFR and KBI of CBL. There is no difference in the failure rates comparing crossing the SB with a pressure guide wire and a coronary guide wire. Thus, FFR can be safely and effectively performed after stenting in CBL.



Left Main Intervention

CRT-166

Early and Long-Term Clinical Outcomes Following Primary Percutaneous Coronary Intervention in Acute Myocardial Infarction Patients with Unprotected Left Main Disease

Woong Gil Choi,[1] Seung-Woon Rha,[2] Byoung Geol Choi,[2] Se Yeon Choi,[2] Sang-Ho Park,[3] Ji Young Park,[4] Yun-Hyeong Cho,[5] Won-Yu Kang,[6] Dong Joo Oh[2]
[1]Cardiology, Chungju Kunkuk University, Chungju, Korea, Republic of; [2]Cardiovascular Center, Korea University Guro Hospital, Seoul, Korea, Republic of; [3]Cardiology Department, Soonchunhyang university cheonan hospital, Cheonan, Korea, Republic of; [4]Cardiovascular Center, Eulji University, Eulji General Hospital, Seoul, Korea, Republic of; [5]Cardiovascular Center, Myongji Hospital, Seoul, Korea, Republic of; [6]Cardiovascular center, Kwanju Bohoon General Hospital, Kwangju, Korea, Republic of

Background: Acute myocardial infarction (AMI) patients (pts) due to unprotected left main coronary artery (ULMCA) disease represent a rare, high risk group. Emergency percutaneous coronary intervention (PCI) may be the preferred strategy but there are limited data. We investigated early and 1-year clinical outcomes following primary PCI in AMI pts with ULMCA disease.
Method: The study population consisted of a total 47 consecutive AMI ULMCA disease underwent primary PCI between November 2004 and August 2012. GP IIb/IIIa blocker and intraarterial balloon pump support were depending on physician's discretion. We evaluated major cumulative clinical outcomes up to 1 year.
Result: Male were in 78.7% and mean age was 66.39 ± 9.504. Half of pts were presented with STEMI (48.9%). Hypertension 66.0%, diabetes 46.8%, smoking 54.2% and mean left ventricular ejection fraction (LVEF) was 43.23± 12.26%. At 1 year, total mortality was 23.4% and target lesion revascularization (TLR) was 14.9% (table). In the multivariate logistic analysis, LVEF was an independent predictor for 1year mortality.
Conclusion: In AMI pts with ULMCA as a culprit lesion, emergency PCI is a valuable therapeutic strategy. However, the rate of major clinical events was relatively high and overall long-term survival depends on LV systolic function on arrival. Special care should be warranted.

Table. Major clinical outcomes up to 1 year

Variables, n (%)	Patients (n=47)
In-hospital clinical outcomes	
Mortality	8 (17.0)
Cardiac death	6 (12.7)
6-month clinical outcomes	
Target lesion revascularization (TLR)	7 (14.9)
Stent thrombosis	1 (2.1)
Q-wave myocardial infarction	2 (4.3)
1-year clinical outcomes	
Mortality	11(23.4)
Cardiac death	9 (19.1)
Myocardial infarction	2 (4.3)
TLR	7 (14.9)
Stent thrombosis	1 (2.1)